Notice No.1

Rules and Regulations for the Construction and Classification of Floating Docks July 2016

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Issue date: August 2016

Amendments to	Effective date
Part 2, Chapter 1, Sections 4 & 5	Corrigenda

Part 2, Chapter 1
General Construction – Hull

■ *Section 4*
Transverse strength

4.1 General

4.1.1 The primary transverse strength members of the dock, throughout its length, are to be capable of withstanding the sum of the following load components:

(a) Self-weight of the dock with supporting blocks.

(b) Maximum ship weight ordinate obtained from the ship weight curve given in *Pt 2, Ch 1, 3.3 Ship weight curve 3.3.1*, which can be taken as:

$W_s = \frac{1{,}167\Delta_s}{L_s}$ tonnes/m

Where it is assumed that the entire ship weight is supported throughout its length by keel blocks. Where the spacing between keel blocks is deemed significant, the local loads imposed by the ship may be specially considered, *see Pt 2, Ch 1, 5.13 Local strength of the structure in way of keel blocks and supporting structure*.

(c) External hydrostatic pressure due to given draught. The most severe condition normally occurs when the draught is equal to the depth to the top of the keel blocks.

(d) Internal hydrostatic pressure due to the level of evenly distributed ballast associated with the draught as in (c) when lifting at maximum capacity.

(e) Wing wall reactions required to give equilibrium on the section under consideration. These reactions at inner and outer wing walls may be taken as equal.

■ *Section 5*
Local strength

5.3 Tank plating

5.3.1 The thickness of boundary plating in ballast tanks, oil tanks, freshwater tanks, and sewage tanks is to be not less than:

$$\cancel{t = 0{,}004_{sf}\sqrt{\frac{\rho hk}{1{,}025}} + 2{,}5 \text{ mm}} \qquad t = 0{,}004sf\sqrt{\frac{\rho hk}{1{,}025}} + 2{,}5 \text{ mm}$$

or 7,5 mm whichever is the greater

where

s = stiffener spacing, in mm

f = $1{,}1 - \cancel{\frac{s}{2500\,l}}\ \frac{s}{2500l}$ but need not to be taken greater than 1,0

ρ = specific gravity of liquid carried in tank, but is not to be taken less than 1,025

h = maximum head, in metres, obtained from the hydrostatic curves for that location and related to a point one-third of the height of the plate. If the plate is located in that part of the tank containing the air cushion, then the head should be extended to the lower boundary of the air cushion. For internal transverse or longitudinal watertight bulkheads, *see Pt 2, Ch 1, 1.6 Data required 1.6.1*

l = overall length of the stiffener or length between span points, in metres, *see Figure 1.5.1 Span points*.

5.12 Non-watertight floors and side girders

5.12.2 Side girders below pontoon deck should be designed to withstand ~~localized~~ localised loads in way of side blocks where appropriate.

5.14 Platforms extending from ends of dock

Table 1.5.1 Non-watertight pillar bulkheads

Parameter	Requirement	
(1) Minimum thickness of plating	7,5 mm in pontoons	
(2) Maximum stiffener spacing	1500 mm	
(3) Minimum depth of stiffeners or corrugations	100 mm	150 mm
(4) Cross-sectional area (including plating) for rolled, built or swedged stiffeners supporting beams, longitudinals, girders or transverses	(a) where $\frac{s}{t} \leq 80$, (b) where $\frac{s}{t} \geq 120$, (c) where $80 < \frac{s}{t} < 120$,	$A = A_1$ $A = A_2$ A is obtained by interpolation between A_1 and A_2
(5) Cross-sectional area (including plating) for symmetrical corrugation	(a) where $\frac{b}{t_p} \leq \frac{750\,\lambda\,l_e}{(\lambda + 0{,}25)r}$	$A = A_1$
	(b) where $\frac{b}{t_p} \geq \frac{750\,\lambda\,l_e}{(\lambda + 0{,}25)r}$	$A = A_2$

Symbols

A = cross-sectional area of stiffener and attached plating, in cm^2

A_1 = $\dfrac{P}{12{,}36 - 51{,}5\dfrac{l_e}{r}}$ cm^2

As a first approximation A_1 may be taken as $\dfrac{P}{9{,}32}$

A_2 = $\dfrac{P}{4{,}9 - 14{,}7\dfrac{l_e}{r}}$ cm^2

As a first approximation A_2 may be taken as $\dfrac{P}{3{,}92}$

P = load, in kN, supported by the pillar. The greater of either the load due to the head of water acting on the pontoon deck and bottom plating (obtainable by analysis of hydrostatic curves), or the load due to the weight of the ship on the keel blocks as detailed in *Pt 2, Ch 1, 5.13 Local strength of the structure in way of keel blocks and supporting structure 5.13.1*

l_e = effective length of pillar, in metres, and is taken as 0,8 of the total depth of the non-watertight girder or bulkhead

s = spacing of stiffeners, in mm

r = radius of gyration of stiffener and attached plating, in mm

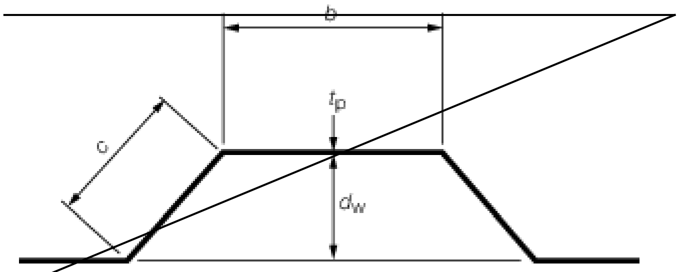
= $10\sqrt{\dfrac{I}{A}}$ mm for rolled, built or swedged stiffeners

= $d_w \dfrac{3b + c}{12(b + c)}$ mm for symmetrical corrugation

I = moment of inertia of stiffener and attached plating, in cm^4

λ = $\dfrac{b}{c}$

d_w,t_p,b,c are defined in ~~*Figure 1.5.3 Cross sectional area (including plating) for symmetrical corrugation*~~ *Figure 1.5.2 Corrugation dimensions*



~~**Figure 1.5.3 Cross sectional area (including plating) for symmetrical corrugation**~~

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